



Union Station Brownfields Clean Up Grant

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Project History

■ Introduction

- Union Station consists of two parcels
 - » ES Main Street – Former Hotel Charles (0.71 acres)
 - » 55 Frank B. Murray St – Union Station Terminal (2.71 acres)
- One EPA grant per parcel

■ Site History

- ES Main Street
 - » Occupied by hotel 1886 –1970s
 - » Hotel demolished in 1990s
- 55 Frank B. Murray St
 - » Train station since the early 1900s
 - » Vacant for approximately 30 years

Previous Environmental Investigations

■ **ASTM Phase I ESA (November 2009)**

- Potential impact from neighboring properties – RR, commercial and industrial operations
- Potential impact from on-site RR switchyard
- Existing AUL and historic release at terminal building

■ **ASTM Phase II ESA (July – August 2010)**

- Installation of 17 borings including 6 wells
- Release of petroleum to soil identified on Former Hotel Charles property
- Free phase petroleum identified in wells on Former Hotel Charles
- Elevated level of nickel in soil at both parcels
- Elevated level of chromium in soil at the Union Station parcel

Previous Investigations (cont.)

- **Release conditions reported to MassDEP**

- RTN 1-17919 issued for release

- **MCP Phase I Investigation**

- Geophysical survey to determine potential source of petroleum release
- Test pit program to identify “anomalies”
 - » Identified two tanks on Hotel Charles parcel
- Additional soil borings and wells installed
- Soil gas points installed in terminal building

- **UST Removal**

- Nov 29 – Dec 1, 2011

Site Issues

Petroleum

■ Petroleum in soil at:

- B-15 - 11' and 17'
- B-21 - 12'
- TP-2 - 1.5; TP-2B - 3.5'

■ PAHs in soil at B-16 at 0-3'

Metals

■ Nickel at:

- B-14 at 1-3'
- B-15 at 10-12'
- B-19 at 10-12'
- B-22 at 6-9'
- B-23 at 10-12'

EPA Brownfields Grants

- **City of Springfield applied for Brownfields Clean up grants for two site parcels in November 2010**
- **City awarded both grants**
 - Hazardous Material Grant – Union Station
 - Petroleum Grant – Former Hotel Charles
- **Through public RFP process, Tighe & Bond was selected as environmental consultant**



Concurrent Work

- **SHPO filing**
- **Researching funding options**
- **Developing design of new transit center**



EPA Brownfields Project Goals

- **Reduce potential risks posed by site release to soil, groundwater, and indoor air**
 - ABCA prepared to evaluate clean up options
 - » No action
 - » Injection of remedial additives
 - » Soil excavation and off-site disposal
- **Each option was evaluated to determine effectiveness, schedule, and cost**
- **No Action**
 - Not a viable alternative based on existing site conditions

Remedial Alternatives

■ Injection of Remedial Additives

- Additive either stimulates native bacteria to breakdown petroleum or chemically breaks down contaminant

■ Cons

- Presence of free phase petroleum would required large amount of injections = Large cost, multiple injections, long timeframe
- Requires multiple follow-up monitoring events

■ Pro

- Relatively non-disruptive
- Doesn't require large amounts of equipment
- Each injection event relatively quick to complete

Remedial Alternatives (cont.)

■ **Soil Excavation and Off-Site Disposal**

- Removal of impacted soil and groundwater
- Collection of confirmatory samples
- Backfilling excavation

■ **Cons**

- Requires large excavation equipment
- Trucking of soil to approved disposal site
- Requires follow-up groundwater monitoring

■ **Pros**

- Effective approach for free phase petroleum
- Physical removal of soil that may be acting as source to groundwater impacts

Selection of Remedial Alternative

- **Soil excavation and off site disposal selected as remedial option**
 - ABCA available for review and comment
- **Next Steps**
 - Submit QAPP (scope of work) to EPA
 - Advance borings to define excavation limits and collect samples for approval at disposal facility
 - Prepare specifications to select contractor

Public Outreach

- **Website: Periodic announcements/documents may be available at the City's website**
www.springfieldplanning.org
- **Report repository is at the City of Springfield Planning and Economic Development Office –**
70 Tapley Street, Springfield
Hours: Monday – Friday 8:30 am through 4:30 pm



DISCUSSION